

CLAIMS

The claims are presented here for reference, with their status indicated in parenthesis.

1. (Previously presented) A disposable lighter, comprising:

a lighter body for receiving a liquefied fuel therein;

a mounting frame, which is sealedly affixed on top of said lighter body, comprising a first and a second supporting wall upwardly extended from two sides of said mounting frame, said mounting frame further having a vertical spring chamber between said first and second supporting walls;

a flint spring being received in said spring chamber;

a gas lever being pivotally mounted between said first and second supporting walls;

a gas valve with a gas nozzle said gas nozzle being engaged with an end of said gas lever to permit release of gas from an interior of said lighter body via said gas valve;

an ignition device comprising a flint and a striking wheel, said striking wheel having a circumferential coarse striking surface being positioned right above and in contact with said flint and rotatably mounting between said first and second supporting walls, wherein said striking wheel further comprising two circular discs located at two sides of said striking surface, each of said circular discs having a circumferential surface and positioned within each of two gaps formed between said first and second supporting walls and said striking wheel; and

a U-shaped wind shield mounted on said first and second supporting walls to cover said gas nozzle and said first and second supporting walls, said wind shield having an all around vertical U-shaped side wall which has a round end portion and two wing portions extending from said round end portion, a top wall horizontally and inwardly extending from a top side of said

round end portion of said U-shaped side wall and defining a cutout right above said gas nozzle, and a first and a second L-shaped bent-edge members which are respectively and perpendicularly bent from a top side and an end side of said wing portions, wherein said first and second bent-edge members are respectively extended from said top wall along said top side and said end side of each of said wing portions for fittedly and respectively resting on a horizontal top edge and a vertical rear edge of each of said first and second supporting walls, a top end corner of each of said wing portions forming a curved corner which has a curvature matching with at least a quarter of a circumference of said striking wheel, so that said striking wheel is sidewardly covered by said two wing portions of said wind shield, wherein said first and second bent-edge members of said wind shield are respectively and inwardly extended until abutting two sides of said striking wheel to form two protecting bent-edge members for better striking contact by increasing a contact area with a user's thumb.

2. (Previously presented) A disposable lighter, as recited in claim 1, wherein each of said circular discs has a diameter equal to that of said striking wheel.

3. (Previously presented) A disposable lighter, as recited in claim 1, wherein each of said circular discs has a diameter smaller than that of said striking wheel to form a supporting disc.

4. (Previously presented) A disposable lighter, as recited in claim 1, wherein a radius of said striking wheel is equal to a radius of said curved corner of each of said wing portions of said wing shield.

5. (Previously presented) A disposable lighter as recited in claim 2, wherein a radius of said striking wheel is equal to a radius of said curved corner of each of said wing portions of said wind shield.

6. (Previously presented) A disposable lighter, as recited in claim 3, wherein a radius of said striking wheel is equal to a radius of said curved corner of each of said wing portions of said wind shield.

7. (Previously presented) A disposable lighter, as recited in claim 1, wherein a radius of said striking wheel is slightly smaller than a radius of said curved corner of each of said wing portions of said wind shield.

8. (Previously presented) A disposable lighter, as recited in claim 2, wherein a radius of said striking wheel is slightly smaller than a radius of said curved corner of each of said wing portions of said wind shield.

9. (Previously presented) A disposable lighter, as recited in claim 3, wherein a radius of said striking wheel is slightly smaller than a radius of said curved corner of each of said wing portions of said wind shield.

10. (Previously Presented) A disposable lighter, comprising:
a lighter body for receiving a liquefied fuel therein;

a mounting frame, which is sealedly affixed on top of said lighter body, comprising a first and a second supporting wall integrally, parallelly, vertically, and upwardly extended from two sides of said mounting frame, said mounting frame further having a vertical spring chamber between said first and second supporting walls; a flint spring being received in said spring chamber;

a gas lever being pivotally mounted between said first and second supporting walls and having a central cutout to allow said spring penetrating therethrough to insert into said spring chamber, said gas lever further integrally providing a thumb pusher at one end thereof;

a gas valve with a gas nozzle extending upwards above said mounting frame being installed inside said mounting frame, said gas nozzle being engaged with another end of said gas lever, so that when said thumb pusher is pushed downwardly, said another end of said gas lever lifts said gas nozzle to release gas from an interior of said lighter body via said gas valve;

an ignition device comprising a flint and a striking wheel, wherein said flint is supported on top of said flint spring with a bottom portion thereof inserting into said spring chamber, said striking wheel which has a circumferential coarse striking surface being positioned right above said flint by rotatably mounting between said first and second supporting walls, so that said flint is pressed downwardly by said circumferential coarse striking surface of said striking wheel, and that said flint is relatively pressed by said flint spring upwards to urge against said circumferential coarse striking surface of said striking wheel, said circumferential coarse striking surface having a width slightly larger than a diameter of said flint, wherein said striking wheel further comprises two circular discs integrally formed at two sides of said striking wheel, each of said circular discs having a circumferential surface and a width equal to two gaps formed between said first and second supporting walls and said striking wheel, said circular discs each having a diameter equal to that of said striking wheel so as to fill said two gaps respectively; and

a U-shaped wind shield mounted on said first and second supporting walls to cover said gas nozzle and said first and second supporting walls, said wind shield having an all around vertical U-shaped side wall which has a round end portion and two wing portions extending from said round end portion, a top wall horizontally and inwardly extending from a top side of said round end portion of said U-shaped side wall and defining a cutout right above said gas nozzle, and a first and a second L-shaped bent-edge members which are respectively and perpendicularly bent from a top side and an end side of said wing portions, wherein said first and second bent-edge members are respectively extended from said top wall along said top side and said end side of each of said wing portions for fittedly and respectively resting on a horizontal top edge and a vertical rear edge of each of said first and second supporting walls, a top end corner of each of said wing portions forming a curved corner which has a curvature matching with at least a quarter of a circumference of said striking wheel, so that said striking wheel is sidewardly covered by said two wing portions of said wind shield.

11. (Previously presented) A disposable lighter, as recited in claim 10, wherein a radius of said striking wheel is equal to a radius of said curved corner of each of said wing portions of said wind shield.

12. (Previously presented) A disposable lighter, as recited in claim 3, wherein a radius of said striking wheel is slightly smaller than a radius of said curved corner of each of said wing portions of said wind shield.

13. (Previously presented) A disposable lighter, comprising:

a lighter body for receiving a liquefied fuel therein;

a mounting frame, which is sealedly affixed on top of said lighter body, comprising a first and a second supporting wall upwardly extended from two sides of said mounting frame, said mounting frame further having a vertical spring chamber between said first and second supporting walls;

a flint spring being received in said spring chamber;

a gas lever being pivotally mounted between said first and second supporting walls;

a gas valve with a gas nozzle, said gas nozzle being engaged with an end of said gas lever to permit release of gas from an interior of said lighter body via said gas valve;

an ignition device comprising a flint and a striking wheel, said striking wheel having a circumferential coarse striking surface being positioned right above and in contact with said flint and rotatably mounting between said first and second supporting walls, wherein said striking wheel further comprising two circular discs located at two sides of said striking surface, each of said circular discs having a circumferential surface and positioned within each of two gaps formed between said first and second supporting walls and said striking wheel; and

a U-shaped wind shield extends over said first and second supporting walls to cover said gas nozzle and said first and second supporting walls, said wind shield having an all around vertical U-shaped side wall which has a round end portion and two wing portions extending from said round end portion, and a first and a second L-shaped bent-edge members which are respectively and perpendicularly bent from a top side and an end side of said wing portions, said striking surface at an elevation lower than said bent-edge members, wherein said first and second bent-edge members are respectively extended from a top wall along said top side and said end side of each of said wing portions, a top end corner of each of said wing portions forming a

curved corner which has a curvature matching with at least a quarter of a circumference of said striking wheel, so that said striking wheel is sidewardly covered by said two wing portions of said wind shield, wherein said first and second bent-edge members of said wind shield are inwardly extended to form two protecting bent-edge members for better striking contact by increasing a contact area with a user's thumb.

14. (Previously presented) A disposable lighter, as recited in claim 13, wherein each of said circular discs has a diameter equal to that of said striking wheel.

15. (Previously presented) A disposable lighter, as recited in claim 13, wherein each of said circular disc has a diameter smaller than that of said striking wheel to form a supporting disc.

16. (Previously presented) A disposable lighter, as recited in claim 13, wherein each of said circular discs has a diameter larger than that of said striking wheel.

17. (Previously presented) A disposable lighter, comprising:

a lighter body for storing fuel;

a mounting frame, which is sealedly affixed on top of said lighter body, comprising a first and a second supporting wall upwardly extended from two sides of said mounting frame;

a vertical spring chamber between said first and second supporting walls of said mounting frame, said vertical spring chamber with a height shorter than said first and second supporting walls;

a flint spring being received in said spring chamber;

a gas lever being pivotally mounted between said first and second supporting walls and having a central cutout to allow said spring penetrating therethrough to insert into said spring chamber, said gas lever further integrally providing a thumb pusher at one end thereof and forming a lifting hole engaged with a gas nozzle at the other end;

a gas valve with said gas nozzle extending upwards above said mounting frame being installed inside said mounting frame, said gas nozzle being engaged with another end of said gas lever, so that when said thumb pusher is pushed downwardly, said other end of said gas lever lifts said gas nozzle to release gas from an interior of said lighter body via said gas valve;

an ignition device comprising a flint and a striking wheel, wherein said flint is supported on top of said flint spring with a bottom portion thereof inserting into said spring chamber, said striking wheel which has a circumferential coarse striking surface being positioned right above said flint by rotatably mounting between said first and second supporting walls, so that said flint is pressed downwardly by said circumferential coarse striking surface of said striking wheel, and that said flint is relatively pressed by said flint spring upwards to urge against said circumferential coarse striking surface of said striking wheel, wherein said striking wheel further comprises two circular discs integrally formed at two sides of said striking wheel; and

a U-shaped wind shield extends over said first and second supporting walls to cover said gas nozzle and said first and second supporting walls, said wind shield having an a U-shaped side wall which has a round end portion and two wing portions extending from said round end portion, and a first and a second L-shaped bent-edge members which are respectively and perpendicularly bent from a top side and an end side of said wing portions, said striking surface at an elevation lower than said bent-edge members, wherein said first and second bent-edge members are respectively extended from a top wall along said top side and said end side of each

of said wing portions, a top end corner of each of said wing portions forming a curved corner which has a curvature matching at least a quarter of a circumference of said striking wheel, so that said striking wheel is sidewardly covered by said two wing portions of said wind shield, wherein said first and second bent-edge members of said wind shield are inwardly extended to form two protecting bent-edge members for better striking contact by increasing a contact area with a user's thumb.